

D.P.U. 93-15/16

Investigation by the Department of Public Utilities on its own motion as to the propriety of (1) the rates and charges set forth in the following tariffs of Cambridge Electric Light and Commonwealth Electric Companies: M.D.P.U. No. 523 and No. 276, respectively, filed with the Department on December 23, 1992, to become effective January 1, 1993, and suspended until July 1, 1993, proposing to collect lost base revenues through the Companies' respective conservation charges; (2) the proposed implementation of the Companies' Conservation Voltage Regulation Program; and (3) the Companies' 1992 C&LM performance.

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I. PROCEDURAL HISTORY

On October 1, 1992, Cambri dge Electri c Li ght Company ("Cambri dge") and Commonweal th Electri c Company ("Commonweal th") (together, the "Compani es") fi led wi th the Department of Publi c Uti li ti es ("Department"), pursuant to G.L. c. 164, § 94 and 220 C.M.R. §§ 9.00 et seq., a joi nt peti ti on for preapproval the Compani es' proposed conservati on and load management ("C&LM") programs for a one and one-hal f year peri od and for cost recovery for expenses i ncurred as a resul t of i mpl ementi ng sai d programs. The Department's i nvesti gati on of the Compani es' joi nt peti ti on was docketed as D.P.U. 92-218. Pursuant to an Order of Noti ce i ssued on November 9, 1992, the Department determi ned the parti es to that case and held three publ i c heari ngs on November 30, December 1 and December 2, 1992.

On December 23, 1992, the Compani es separately fi led rate schedul es M.D.P.U. No. 523 (Cambri dge) and M.D.P.U. No. 276 (Commonweal th), for Department approval , whi ch reflect the Compani es' request to recover lost base revenues ("LBR") through thei r respecti ve conservati on charge ("CC") deci mal s. On January 13, 1993, the Department suspended the operati on of the respecti ve rate schedul es unti l July 1, 1993, to al low for further i nvesti gati on. The i nvesti gati ons of the Compani es' LBR requests were docketed as D.P.U. 93-15 (Cambri dge) and D.P.U. 93-16 (Commonweal th).

On Apri l 9, 1993, the Department i ssued i ts Order i n D.P.U. 92-218, di smi ssi ng the Compani es' C&LM preapproval fi li ng, fi ndi ng that adjudi cati on of that fi li ng was not i n the publ i c i nterest and would not l ead to the ti mely i mpl ementati on of cost-effecti ve C&LM programs. Cambri dge Electri c Li ght Company/Commonweal th Electri c Company,

D.P.U. 92-218, at 12 (1993).¹

Also in D.P.U. 92-218, the Department consolidated the investigations of the Companies' LBR recovery requests, docketed as D.P.U. 93-15/16, and set out additional issues that would be investigated as part of D.P.U. 93-15/16, namely, (1) the Companies' proposed Conservation Voltage Regulation ("CVR") Program, which was part of the Companies' filing in D.P.U. 92-218, and (2) the Companies' 1992 C&LM performance and management.² Id. at 15-18.

On April 9, 1993, the Department issued an Order of Notice in D.P.U. 93-15/16 that, inter alia, set April 14, 1993 as the deadline for filing petitions for leave to intervene in the proceeding and established April 21, 1993 as the public hearing date. The Hearing Officer granted the petitions for leave to intervene as a party filed by I RATE, Inc. ("I RATE"), the Conservation Law Foundation, Inc. ("CLF"), the Division of Energy Resources ("DOER"), the Massachusetts Institute of Technology ("MIT"), and Save Our Regional Economy ("SORE"). The Attorney General of the Commonwealth ("Attorney General") filed a notice of intervention pursuant to G.L. c. 12, § 11E. Return of Service was properly made at the

¹ Failure of the Companies to implement cost effective C&LM programs was a possibility anticipated by the Department in its Letter Order of May 29, 1992, when it required a competitive C&LM solicitation to provide C&LM services to all of the Companies' customer classes as part of Department directives in the Companies' integrated resource management ("IRM") case, docketed as D.P.U. 91-234. D.P.U. 92-218, at 13.

² The Department instituted a separate schedule in D.P.U. 93-15/16 for its investigation of the Companies' 1992 C&LM performance and intends to issue an Order, D.P.U. 93-15/16-A, on that subject and any related procedural issues by July 30, 1993. See Hearing Officer Memorandum, attached schedule (April 27, 1993).

April 21, 1993 public hearing.

The Department conducted three days of evidentiary hearings on May 4, 5 and 7, 1993, regarding the Companies' proposed CVR Program and LBR recovery as well as related matters regarding the calculation of the CC decimals applicable to each rate category. The Companies introduced six witnesses: Anthony J. Casella, manager of rate administration for COM/Energy; Steven L. Geller, director of demand-program administration for Commonwealth; Beauford L. Hunt, manager of integrated resource planning for Commonwealth; Paul A. Fiocchi, manager of demand-program administrative services for Commonwealth; Tina L. Torres, demand planning and evaluation analyst for Commonwealth; and Paul J. Shields, chief system operator for Commonwealth.

For purposes of the CVR and LBR investigations as well as the CC decimal calculation, the Department moved the following exhibits into the record of D.P.U. 93-15/16: Exhibits C-1 through C-12; Exhibits DPU-1-LBR-1 through 4; Exhibits DPU-1-PER-5 through 19; Exhibits DPU-2-LBR-1 through 10; Exhibits DPU-3-CVR-1 through 10; and Exhibits DPU-1 through 24. The Companies responded to 40 record requests and Briefs/Reply Briefs were timely filed by the Companies, SORE, and I RATE concerning the LBR and CVR investigations as well as the CC decimal calculation.

II. LOST BASE REVENUES

A. Introduction

The Department's policy regarding LBR is based on the premise that when utilities implement C&M programs they are taking positive action to reduce sales of their product. Because of the way utilities rates are set by the Department (i.e., based on a historic test

year), when a utility acts to reduce its sales, it is foregoing recovery of costs that it has incurred in order to provide electricity to customers. That is, by implementing conservation programs, a company loses revenues that were allowed in a base rate proceeding to cover historical test-year costs without experiencing a corresponding reduction in these costs. This loss occurs because rates per kWh are set by dividing total revenue requirements by test year sales. If utilities act to reduce sales by promoting conservation, they will not recover their full revenue requirements. LBR recovery provides a way to make up this shortfall.

In D.P.U. 86-36-F, the Department articulated a general policy towards the recovery of "revenue loss caused by successful C&LM programs" between rate cases. Id. at 35. In that proceeding, the Department stated that "[i]f a company demonstrates that the successful performance of its C&LM programs will result in sales erosion that adversely affects revenues in a significant, quantifiable way, the Department would entertain specific proposals for appropriate adjustments." Id. at 35-36.

In Western Massachusetts Electric Company, D.P.U. 89-260 (1990), the Department noted that "[h]istorical test year ratemaking assumes a direct relationship between cost and sales" and that "an adjustment for lost revenues would simply restore the assumed relationship between sales levels and revenue requirements that were used in setting rates before an electric company began achieving savings from its C&LM programs." Id. at 105,

³ The Department's historical test year ratemaking practices are such that the test year associated with a base rate proceeding will incorporate all reductions in energy and capacity sales due to C&LM program implementation prior to the beginning of the test year. Accordingly, LBR recovery is appropriate, at most, for reduced energy and capacity sales due to C&LM measures installed after the end of the most recent test year, and until the next rate case and test year.

106. In maintaining this relationship, the Department's policy was intended to remove all financial disincentives the electric companies might perceive as reason not to implement C&LM programs.⁴

B. The Companies' Proposal

The Companies proposed to collect LBR, for the six-month period from July 1, 1993 through December 31, 1993, based on estimates of kilowatt hour ("KWH") savings for the 12-month period January 1, 1993, through December 31, 1993. The total savings for which LBR recovery is requested are those that result from implementation of the Companies' C&LM programs⁵ since the end of each company's last test year⁶ (Exh. C-6, at 1.2.22). The Companies calculated this LBR amount to be \$4.1 million for Commonwealth and

⁴ In addition, the Clean Air Act Amendments of 1990 ("CAAA") requires utilities to demonstrate, and the Energy Policy Act of 1992 ("EPACT") requires public utility commissions to consider whether their rate making treatment of C&LM provides for "net income neutrality" (CAAA § 73.82(a)(9)) and that C&LM is "at least as profitable as" supply side investments (EPACT § 303(b)(4)). One suggested mechanism within CAAA to achieve net income neutrality is a specific rate adjustment formula that allows a utility "to recover in its retail rates the full cost of conservation measures plus any associated net revenues lost as a result of reduced sales resulting from conservation initiatives." The Department's LBR policy is consistent with this provision of the CAAA.

⁵ Commonwealth is currently implementing a Hot Water/General Use and a Residential Electric Space Heat program for residential customers, and is completing installations of so-called "pipeline" projects in its Customized Rebate Program ("CRP") for commercial and industrial ("C&I") customers. Cambridge currently offers only a Hot Water/General Use program for residential customers and is also completing pipeline projects in CRP for C&I customers. Although the Companies suspended operation of the Direct Investment program for small C&I customers in September 1991, Commonwealth seeks the recovery of LBR associated with only those installations in that took place following the end of that company's test year.

⁶ The test year for Commonwealth ended June 30, 1990 and for Cambridge June 30, 1992.

\$103,353 for Cambridge (i.d. at 1.2.24, 1.2.25). The Companies calculated LBR for 1994, but did not propose collection of 1994 LBR at this time (i.d.).

The Companies proposed to recover LBR by multiplying the KWH savings by the respective per KWH charge ("LBR decimal") for each rate category as determined in the Companies' response to Exhibit DPU-1-LBR-2⁷ (Exh. C-6, at 1.2.21-1.2.22). LBR decimals were developed for each category by deducting fuel and customer charge revenue from total test year revenue and then dividing by test year KWH sales (Exh. DPU-1-LBR-2).

C. Recovery of LBR

1. Positions of the Parties

a. I RATE

I RATE notes that by paying for LBR, ratepayers are expected to pay a higher rate for less electricity, thus guaranteeing that the Companies' customers will continue to pay a "premium" for their power (I RATE Brief at 5). I RATE argues that recovery of LBR should be tied to the Companies' ability to achieve planned benefit/cost ratios (i.d.). I RATE further argues that CC decimals should be held at minimum levels while excess generating capacity exists on the Companies' system, and that the recovery of LBR, if any, "should be adjusted to reflect excess costs which may have been incurred during the installation of conservation measures" (i.d.).

b. The Companies

⁷ The Companies first proposed an LBR recovery method in their October 1, 1992 filing in D.P.U. 92-218. The Companies altered their proposal for LBR recovery in their December 23, 1992 Supplemental Filing and again in the instant filing.

The Companies argue that their LBR proposal is consistent with "Department precedent and longstanding practice for other utilities" (Companies Brief at 10). The Companies contend that the Department has found "a need to allow utilities to adjust their rates between rate cases to compensate for any significant sales erosion and revenue loss resulting from the implementation of C&LM programs" (*id.*, citing D.P.U. 86-36-F at 35). Further, the Companies cite other electric company C&LM preapproval cases where the recovery of LBR was allowed and argue that their proposal "simply seeks to be consistent with this extensive precedent" (*id.* at 11, citing Boston Edison Company, D.P.U. 90-335 (1992) at 127; D.P.U. 89-260, at 105).

The Companies contend that LBR recovery is proper and that they "voluntarily forewent recovering LBR" in prior years in order to address concerns with the rate impacts of C&LM, and that, in fact, they "sacrificed recovery of very substantial revenues in order to keep rates lower for their customers" (*id.* at 12-13). The Companies also note that they are not proposing LBR recovery associated with the CIR program at this time, because actual implementation of the program will not occur until late 1994 (*id.* at 13).

The Companies contend that arguments regarding the recovery of LBR were reviewed and resolved in D.P.U. 89-260, and that the Department later rejected arguments against recovery of LBR in Western Massachusetts Electric Company, D.P.U. 91-44 (1991) at 104 (*id.* at 12). The Companies disagree with I RATE's argument that recovery of LBR should be tied to certain performance criteria such as benefit/cost ratios. The Companies argue that "Department precedent makes clear that recovery of LBR ... is based on actual savings achieved and not other, as yet undefined, criteria" (*id.*, citing D.P.U. 90-335, at 127).

Finally, the Companies note that "any ex post facto move to establish a new methodology for recovery of LBR is not advisable and certainly is not merited based on the record evidence in this proceeding" (id., citing Boston Gas Company v. Department of Public Utilities, 367 Mass 92, 103-104 (1975)).

2. Analysis and Findings

In D.P.U. 89-260, the Department determined that "the impact of C&LM is different from other factors that affect sales and revenues, such as weather and economic trends. ...[U]nlike these other factors, the impact of C&LM is asymmetrical because C&LM is explicitly designed only to decrease sales." Id. at 105. Further, the Department stated that LBR recovery would be based on "the amount of actual energy savings that result from the Company's C&LM programs." Id. at 107. Accordingly, the Department rejects I RATE's argument that recovery of LBR should be tied to the achievement of planned benefit/cost ratios. Further, the Department rejects at this time I RATE's contention that any LBR amount granted should be adjusted to reflect excess costs that may have been incurred during the installation of conservation measures because I RATE's argument is inconsistent with Department precedent.⁸

The Department finds that the Companies' proposal is consistent with our precedent regarding the recovery of LBR. However, recently, questions have arisen regarding the

⁸ The Department recognizes I RATE's concerns regarding the Companies' ability to deliver cost-effective C&LM programs and the appropriateness of receiving LBR recovery for savings that have not been achieved cost-effectively. However, the performance of the Companies regarding C&LM program implementation and cost-effectiveness will be addressed during the second phase of this proceeding.

recovery of LBR for utility-sponsored C&LM programs. As a result, the Department questions whether the current methodology used to calculate the LBR decimal accurately reflects the lost fixed costs associated with saved demand and energy sales. Further, the Department in D.P.U. 89-260 indicated that recovery of LBR might only be necessary for the short term because in the long term, companies will be able to adjust their operating costs to reflect the reduction in sales. Specifically, the Department stated that

when viewed from a long-term planning perspective, electric companies will experience variable O&M [operation and maintenance] costs that are not reflected through the fuel charge. However, from the short term (e.g., less than one year) perspective, C&LM does not appear to result in significant variable O&M savings for a Company's marginal generating facilities.

Id. at 106.

Accordingly, as part of their next CC filing, the Department directs the Companies to provide an analysis of the fixed cost recovery actually foregone due to C&LM program implementation, including an analysis of non-fuel variable costs that may go unrecovered due to reduced energy sales.

The Department, however, agrees with the Companies that any move to establish a new methodology for recovery of LBR cannot be determined based on the record in this proceeding. Accordingly, for the present proceeding, the Department accepts as consistent with precedent the Companies' proposal to calculate rate category-specific LBR decimals based on the methodology outlined in DPU-1-LBR-2, with the result to be multiplied by the KWH savings as determined in Section III.C, below and applied to the time frame specified in Section IV, below.

D. Calculation of Energy Savings

1. The Companies' Proposal

The Companies proposed to recover LBR by multiplying the reduction in energy sales in each rate category due to C&LM program implementation by the respective LBR decimal (Exh. C-6, at 1.2.21). To determine the reduction in energy sales per rate class, the Companies proposed to use a combination of impact evaluation results applied to actual participation data and revised engineering estimates (*id.* at 1.2.22). The Companies indicated that the LBR is to be reconciled for two years, consistent with Department precedent,⁹ to incorporate any changes in measured savings determined through annual evaluation and monitoring efforts (*id.*).

The Companies argue that they have used conservative, impact evaluation-based estimates of projected savings to develop their LBR recovery rates, rather than the engineering estimate-based savings projections that were allowed by the Department in D.P.U. 91-44 and D.P.U. 90-335 (Companies Brief at 12-13).

a. Hot Water/General Use, Residential Electric Space Heat, and Direct Investment programs

For the Hot Water/General Use, Residential Electric Space Heat, and Direct Investment programs, savings estimates for 1990 and 1991 were based on impact evaluation data from 1990 combined with actual participation data from each of those years. The impact evaluations for these programs were based on a "net savings" methodology (DPU-RR-

⁹ In D.P.U. 91-44, the Department ordered Western Massachusetts Electric Company ("WMECo") to implement a "[d]ouble reconciliation of the [LBR] over 2 years in order to match recovery with actual savings.... We expect [WMECo] to fully reconcile the [LBR] within 2 years under this method." *Id.* at 109.

LBR-10). The net savings methodology examines 12 months of pre- and post-installation billing data for a sample of participants and non-participants. Savings estimates for 1992 and 1993 for the Hot Water/General Use and Residential Electric Space Heat programs¹⁰ were based on recalculated engineering estimates multiplied by actual and estimated participation rates, as available (Exh. C-7, at 1.3.12).

Regarding free-rider estimates for the Hot Water/General Use, Residential Electric Space Heat, and Direct Investment programs, the Companies, citing an Electric Power Research Institute report ("EPRI Report"), stated that the net savings methodology "explicitly accounts for free riders" (RR-DPU-LBR-10). Specifically, the EPRI Report stated that "[o]ne of the options available to evaluators for evaluating participant group response ... is to use a control group of non-participants" as was done in the Companies' net savings approach (*id.*).

b. Customized Rebate Program

For the Customized Rebate Program ("CRP"), impact evaluation data from 1990 were combined with participation data for each calendar year to develop savings estimates for 1990, 1991, and 1992 (Exh. C-7, at 1.3.12). The Companies based their impact evaluations for the CRP on a project-specific analysis to determine net savings (RR-DPU-LBR-10). The Companies stated that the savings estimates for the CRP could not be based on the net savings methodology because "[m]easuring net savings in a program as diverse as the present CRP program is a difficult and, arguably, an excessively time-consuming task..." (*id.*). The

¹⁰ Because the Direct Investment program was suspended in 1991, no additional implementation or impact evaluations are expected for that program.

Companies based savings estimates for CRP implementation on during 1993 on recalculated engineering estimates, multiplied by expected measure-specific implementation levels (Tr. 3, at 58).

Regarding free-rider estimates for CRP, the Companies' witness testified that the Companies did not explicitly incorporate estimates of free riders in the savings calculations (Tr. 2, at 110). The Companies cited the CRP process evaluation report which stated that "most small (83%) and large (67%) participants are not free riders" (RR-DPU-LBR-10, citing Exh. DPU-1-PER-5, Att. 5D). In declining to include free riders in their savings estimates, the Companies stated that the free-rider estimates were not "rigorously quantified"¹¹ or "reliable for purposes of program savings reconciliation" (RR-DPU-LBR-25). The Companies also stated that they believe that the market research conducted among CRP participants may overstate free riders, perhaps significantly, contending that customers may respond to a survey with answers they think would be "correct," but that did not necessarily match their actual intended actions (*id.*). The Companies further stated that they believe that free-rider estimates should be: (1) net of free riders;¹² (2) discounted to account for the fact that, on average, customers would install fewer C&LM measures on their own than they would in a company-driven program; and (3) corrected by a statistical

¹¹ The Companies' response refers to the Department's decision in Massachusetts Electric Company, D.P.U. 89-194/195 (1990). In that case, the Department determined that "in order to be included in a program's cost-effectiveness test, free-rider numbers should be rigorously quantified." *Id.* at 109.

¹² Free riders are customers who, due to the marketing and implementation of a company-driven C&LM program, install C&LM measures in their facilities, yet request no rebate or other incentive from the utility company.

factor to account for survey bias (i.d.).

When estimating savings for CRP by extrapolating information from a limited sample of participants, the Companies stated that certain participants had been eliminated from data samples¹³ for purposes of statistical analysis only, and that most problems associated with eliminated data have been identified as metering or accounting-related problems (DPU-RR-LBR-26). The Companies further stated that they believe that the final sample data selected for statistical analysis represented, on average, all of the participants (i.d.).

The CRP impact evaluation stated that a significant percentage of the savings, particularly associated with the industrial sector, were attributable to the economic recession (DPU-RR-LBR-14, Att. 14D). Specifically, the impact evaluation stated that the ratio of gross savings in [the industrial] sector with respect to estimated savings "is largely due to a few projects with extremely large loads, where economic factors dictated a reduction of building use" (i.d.). However, the Companies stated that it was not possible to calculate accurately the effect of these economic factors, nor of other market changes, on a customer's use of energy (DPU-RR-LBR-27). The Companies further contended that there are many economic and market conditions that can cause savings estimates to be either greater or less than expected (i.d., citing DPU-RR-LBR-14, Att. 14D at 22). The Companies added that their savings estimates are reliable, and should not be altered without reliable quantification of all reasonable factors (i.d.).

¹³ For example, reasons for elimination from data sets include "[m]ultiple buildings on one meter that were not involved in the project"; "Building not in use - billing terminated"; "Overlap between this project and several others"; "Some buildings in this project also in others" (DPU-RR-LBR-14, Att. 14D).

On brief, the Companies present a host of arguments as to why the savings estimates for CRP are conservative and accurate. First, the Companies argue that the savings associated with CRP are based on "rigorous after-the-fact review [through the impact evaluation] and not on early engineering estimates" (Companies Brief at 15). Second, the Companies contend that although the empirical research conducted indicates that some CRP participants are free riders, of those classified as free riders, a significant portion could only be classified as partial free riders (i.d., citing DPU-1-PER-5, Att. 5D). Third, the Companies assert that program participants use their lights less than before, regardless of operating hours, and that this "reverse snapback effect" serves as an offset to any potential reduction of savings resulting from free riders (i.d. at 16). Fourth, the Companies argue that the empirical research regarding free ridership was completed after the impact evaluation used to develop savings estimates for the CRP, and that "[f]uture evaluation of the CRP will attempt to account explicitly for free riders" (i.d. at 16, citing DPU-RR-LBR-7). Fifth, the impact evaluation used to develop savings estimates used for LBR recovery was based on program implementation over several years. The Companies contend that the CRP has been refined over time, and thus, savings generated by the program have increased significantly. Therefore, the Companies contend, the savings associated with projects included in the LBR recovery (i.e., post-test-year projects) "will tend to be higher than the savings indicated in the impact evaluation" (i.d.).

2. Analysis and Findings

In D.P.U. 89-260, the Department stated "[i]n quantifying the amount of lost fixed revenues it is important to determine the amount of actual energy savings that result from the

Company's C&LM programs" and that "energy savings used to determine [LBR] should be based on after the fact measurement using the best available data." Id. at 107.

a. Hot Water/General Use, Residential Electric Space Heat, and Direct Investment programs

The record indicates that the Companies have developed their LBR recovery proposals for the Hot Water/General Use, the Residential Electric Space Heat, and the Direct Investment programs on net savings impact evaluations, where such impact evaluation data was available. The Department finds that savings estimates developed through the use of net savings impact evaluations are reasonable and, therefore, reliable for purposes of calculating LBR recovery. Further, the Department finds the Companies' arguments that the net savings approach fully accounts for the impact of free riders on the savings estimates to be reasonable.

The Department notes, however, that regardless of the ability of the net savings impact evaluation methodology to account for free riders, behavioral (participant and non-participant) research would benefit the design and implementation of the Companies' C&LM programs in order to (1) minimize free riders over time, and (2) accurately evaluate the size and cost of the untapped C&LM resource for purposes of integrated planning. Accordingly, for all DST programs, the Department directs the Companies to conduct market research among participant and non-participant groups as part of, or in conjunction with, all future program-specific impact evaluations, to determine the percent of free riders.

b. Customized Rebate Program

Regarding the CRP, the Department finds that three factors cloud the savings estimates developed by the Companies: (1) the savings estimates do not account for free riders; (2) the savings estimates were developed from sample data that included participants who are no longer active customers; and (3) the savings estimates did not account for market and economic variables, especially associated with industrial program participants.

Regarding the Companies' failure to adjust the CRP savings estimates to incorporate estimates of free ridership developed through the process evaluation, the Companies stated that the process evaluation found that 67 percent of the participants are not free riders. This implies that 33 percent are free riders. The Companies also indicated that they believe that the empirical research overstates the level of free riders because a significant number are only partial free riders. Further, the Companies contend that the CRP may have caused participants to use less energy regardless of operating hours, and that this "reverse snap back effect" serves as an offset to any potential reduction of savings resulting from free riders. Finally, the Companies argue that the empirical research regarding free ridership was completed after the impact evaluation used to develop savings estimates for the CRP, and that "[f]uture evaluation of the CRP will attempt to account explicitly for free riders."

The Department rejects the Companies' arguments that because the free-rider estimates were developed after the impact evaluations were completed, the Companies could not incorporate the process evaluation results into their savings estimates for this program. Further, the Department does not accept the Companies' arguments that effects of free riders are offset by the fact that the CRP has made participants more aware of their energy use. This effect, if valid, would be fully reflected in the Companies' project-specific impact

evaluations.

The Department finds that, as the Companies contend, free-rider estimates should be re-evaluated to incorporate the following factors: (1) free riders; (2) partial free riders; and (3) survey bias. The Department finds, however, that free-rider estimates should be not excluded from the savings calculations simply because the above-mentioned factors are not easily quantified or because they reduce the net free-rider effect to a lower level.

Regarding the Companies' failure to remove savings from participants who were no longer active customers from their savings calculations, the Companies stated that, although certain participants had been eliminated from data samples only for purposes of statistical analysis, the savings from such customers were included in the total program savings. The Companies argued that most problems associated with the eliminated data have been identified as metering or accounting-related problems. However, based on a review of the CRP impact evaluation, the Department finds that a significant portion of the projects eliminated from the data set were eliminated due to reduced or terminated operations at the customer's facilities.

Similarly, regarding the Companies' failure to account for market and economic variables, specifically for the savings estimates associated with industrial-sector program participants, the Companies stated that it was not possible to calculate the effect of the market and economic trends. In addition, the Companies assert that the savings estimates should not be altered without reliable quantification of all reasonable factors. The Department, however, finds that the Companies inappropriately included gross estimated savings when the CRP impact evaluation clearly stated that economic factors played a significant role in total savings. Although the Department recognizes that the net savings

methodology used for the other three programs would be difficult, if not inappropriate, to use for the CIP because of the non-homogenous nature of the participants, we find that the Companies failed to incorporate the economic variable, and thus, provided unreasonable assumptions of C&LM program induced savings.

In D.P.U. 89-260, the Department found that "C&LM is different from other factors that affect sales and revenues, such as weather and economic trends." Id. at 105. Further, the Department found that, over time, these other trends "will net out to roughly zero," and thus, the risk and reward of increased (decreased) sales associated with fluctuations in the weather and the economy lie solely on the utilities. Id. In the instant case, the Department finds that the Companies' proposed savings estimates shift the risk of economic fluctuation to the Companies' ratepayers by (1) not eliminating non-active customers, and (2) not adjusting for economic factors in the industrial sector. Therefore, we find that the Companies' proposed recovery of LBR does not conform to our precedent regarding the risk and reward associated with economic fluctuation.

Although the Department has found specific problems with the savings estimates for the CIP, we also find that the program has saved a significant quantity of energy. Also, the Department is concerned that if the recovery of LBR is withheld until the Companies develop accurate savings estimates, the revised current LBR added to future LBR incurred could create a significant rate impact. Accordingly, the Department will allow the Companies to recover LBR associated with the CIP based on one half of the proposed savings estimates for that program. The Department directs the Companies to fully reconcile the savings estimates during the next CC proceeding based on the concerns mentioned above. Further,

the Department directs the Companies to provide a thorough basis, with supporting documentation, for the reconciliation at that time.

In their compliance filing, the Department directs the Companies to recalculate the LBR decimals for the affected rate categories based on the findings in this section.

III. CONSERVATION VOLTAGE REGULATION

A. Introduction

Conservation Voltage Regulation ("CVR")¹⁴ is a conservation program, applied to an electric company's distribution system, involving measures and operating strategies designed to provide electricity service at the lowest practicable voltage level, and in a cost-effective manner, while meeting all applicable voltage standards.¹⁵ D.P.U. 90-335, at 67 (1992). CVR lowers customers' energy and capacity consumption by lowering the average voltage applied to customers' appliances. CVR is implemented by electric utilities through modifications to distribution system equipment and operating procedures. D.P.U. 91-80, Phase Two-A at 99.

In Cambridge Electric Light Company and Commonwealth Electric Company, D.P.U. 89-242/246/247, at 66-68 (1990), the Department ordered the Companies to

¹⁴ Throughout this proceeding, the terms Conservation Voltage Regulation and Conservation Voltage Reduction were used interchangeably. The Department has chosen to adopt the term Conservation Voltage Regulation to reflect the fact that proper application of this program will not reduce customer voltages below presently accepted standards.

¹⁵ The voltage standard adopted by the Companies is in accordance with the American National Standards Institute ("ANSI") standard ANSI C84.1-1989. D.P.U. 91-80, Phase Two - A at 99.

investigate the applicability of CIR to their systems, and to implement CIR where cost-effective. In D.P.U. 91-80, Phase Two-A at 102, the Department reaffirmed its directive that the Companies implement all cost-effective CIR on their systems. The Department also directed the Companies, to the extent practicable, to implement first those measures that are the most cost-effective and that can be implemented in the shortest period of time. Id. The Department further directed the Companies, upon the completion of their CIR investigation, to submit to the Department a report summarizing the findings of their investigation and outlining an appropriate strategy for the implementation of CIR. Specifically, the Department ordered the Companies to include in their submittal

first, the results of the investigation, along with an overall strategy and a timetable for the implementation of CIR; second, an estimate of the energy and capacity savings expected from the program; third, an explanation of the feeder-by-feeder screening analysis employed; fourth, an estimate of the benefit-cost ratio of the program, together with an explanation of how the benefits of this program are determined and monetized; fifth, a proposed budget for the program along with a proposal for the cost recovery of the program expenditures; and sixth, the Companies' plans for the evaluation and monitoring of this program.

Id. at 103-104.

In the instant proceeding, the Department investigated the results of the Companies' CIR study together with the Companies' subsequent proposals in the following areas: (1) program design; (2) budget; (3) cost-effectiveness analysis; (4) monitoring and evaluation; (5) cost allocation; and (6) cost recovery.

B. Program Design

1. Summary of the Companies' CIR Study

As directed by the Department in D.P.U. 89-242/246/247, at 66-68, and in D.P.U. 91-80, Phase Two-A at 102-104, the Companies performed an investigation into the applicability of CIR to the Companies' distribution systems. This investigation included extensive research on CIR practices in the industry, the development of computer models for the analysis of CIR costs and benefits, and field testing to verify predicted CIR benefits (Exh. C-3, at 2.2.9-2.2.12, 2.2.17-2.2.30, 2.2.45-2.2.50). The results of the Companies' CIR study indicate that (1) there are cost-effective opportunities for CIR on the Companies' distribution systems, (2) cost-effective opportunities for CIR can be identified on a feeder or substation level through computer modeling, and (3) feeders that supply distribution networks¹⁶ should be exempt from the CIR program (i.d. at 2.2.6).

2. Companies' Proposal

Based on the results of their study, the Companies propose to implement an initial 36-month CIR project (Exh. C-1, at 1.1.3). During this initial period, the Companies plan to implement CIR at a group of five distribution substations where computer modeling has predicted CIR to be the most cost-effective (Tr. 3, at 77; Exhs. C-1, at 1.1.2; C-3, at 2.1.3). During the first 20 months of this initial period, the Companies would develop CIR monitoring equipment requirements, develop detailed substation and feeder computer models, identify necessary substation and feeder modifications, and produce the necessary field

¹⁶ Distribution networks are distinguished from other distribution configurations in that the secondary windings of network distribution transformers are connected together to form a 120/208 volt grid. This secondary grid provides for uninterrupted service to customers in the event of the loss of one or more feeders.

drawings (Exhs. C-1, at 1.1.3; C-3, at 2.1.4-2.1.5). During the following two months, the Companies would implement and test CVR measures (Exh. C-1, at 1.1.3). The final fourteen months of the initial period would be used for CVR operation, verification, and impact evaluation (i.d.).

The Companies propose to implement CVR through the use of Line-drop compensation ("LDC") and, where necessary, distribution circuit modifications (Exhs. C-1, at 1.1.2; C-3, at 2.1.3). LDC is a control device, connected to tap changing transformers and voltage regulators, that measures feeder load current and models the resultant voltage drop. The value of the voltage drop is then used by the tap changers or regulators to raise or lower the feeder voltage. The Companies intend to adjust LDC settings so that the minimum acceptable voltage will be maintained at the electrical end of the distribution feeder (Exh. C-3, at 2.2.10). Where necessary, feeder modifications would be completed before adjusting the LDC on a particular substation or feeder (i.d. at 2.1.3). The Companies indicated that potential feeder modifications could include (1) adding capacitor banks, (2) adding voltage regulators, (3) reconductoring line sections, or (4) upgrading feeders to a higher primary voltage (i.d.).

The Companies stated that, consistent with industry practice, they propose to exclude distribution network circuits from CVR (Exh. C-3, at 2.2.33). The Companies also stated that the exclusion of network feeders would have a domino effect that results in the exclusion from CVR of all feeders, including radial feeders,¹⁷ that are connected to substations that

¹⁷ Radial feeders are supplied by a single source at one end of the feeder. They are (continued...)

supply network feeders.¹⁸ The Companies stated that these exclusions would affect significant sections of Cambridge and New Bedford (*id.*).

The Companies stated that, at the conclusion of the initial 36-month period, they would assess the results of the CVR project (Exh. C-1, at 1.1.4). The Companies further stated that if, as expected, CVR proves to be cost-effective, the Companies then would make any necessary enhancements suggested by actual experience and proceed with a more aggressive implementation of the program (*id.*; Tr. 3, at 74). This more aggressive implementation of CVR would include implementing the program on feeders requiring more costly capital upgrades than those required for the first group of feeders (Tr. 3, at 77). The Companies anticipate that the savings over the lifetime of the program will be 56,373,000 KWH and 561 KW for Commonwealth and 12,674,000 KWH and 117 KW for Cambridge (Exh. C-4, at 2.6.2, 2.6.6; RR-DPU-CVR-1). The Companies stated that if the CVR project proves to be not cost-effective, the Companies then would examine the reasons for this, propose improvements to the program, and make recommendations to the Department (Exh. C-1, at 1.1.4).

3. Analysis and Findings

¹⁷(...continued)

disconnected from network circuits that have multiple sources of supply. Consistent with industry practice, the Company plans to implement CVR primarily on radial feeders (Tr. 3, at 78; Exh. C-3, at 2.2.11).

¹⁸ At the substations in question, all network feeders and radial feeders are connected to a common bus. Consequently, according to the Companies, implementation of CVR on these radial feeders would necessarily result in the unwanted implementation of CVR on the networks (Exh. C-3, at 2.2.33).

The Companies' proposal for the implementation of CVR includes an initial 36-month period in which CVR is implemented at a group of five substations. The Companies also propose to evaluate carefully the results of this initial effort before moving towards a more aggressive, second phase of the program. The Department finds that this proposed framework for the implementation of CVR is in keeping with the Department's directives in D.P.U. 89-242/246/247 and D.P.U. 91-80 Phase Two-A and is, therefore, acceptable. The Department emphasizes, however, that the pace of implementation planned for the initial 36-month period is significantly slower than that which would be acceptable for a mature program. Assuming that the CVR program is shown to be cost-effective, the Department finds that the second phase of program implementation should proceed at a pace significantly greater than that planned for the initial period.

The Companies propose to implement CVR through the use of LDC and, where necessary, through feeder modifications. The Companies also propose to exclude from the CVR program network feeders and feeders that are connected to substations that supply networks. The Department finds that these specific implementation plans are consistent with plans approved by the Department in recent cases involving CVR and are acceptable. See D.P.U. 90-335, at 67-81 (1992); Massachusetts Electric Company, D.P.U. 90-261, at 64-72 (1991).

C. Program Budgets

1. Companies' Proposal

For the period July 1, 1993 through June 30, 1994, the Companies have proposed CVR budgets of \$76,000 for Commonwealth and \$18,000 for Cambridge (RR-DPU-CVR-4).

These budgets include expenditures for (1) engineering consulting to assist the Companies in the evaluation of monitoring system requirements and in the development of monitoring equipment specifications, and (2) computer modeling software to assist the Companies in the further analysis of CVR (i.d.; Exhs. C-2, at 1.2.2; DPU-3-CVR-2). Beginning in late 1994, the Companies expect to make additional expenditures for monitoring equipment, equipment for feeder upgrades, and the leasing of telephone equipment (RR-DPU-CVR-4; Exhs. C-2, at 1.2.2; C-3, at 2.4.2, 2.4.9). These expenditures are reflected in the Companies' projected budgets for 1994 and 1995. For Commonwealth, these projected budgets are \$58,000 and \$158,000 for calendar years 1994 and 1995, respectively (Exh. C-3, at 2.4.2). For Cambridge, these projected budgets are \$10,000 and \$20,000 for calendar years 1994 and 1995, respectively (Exh. C-3, at 2.4.9).

2. Analysis and Findings

In this proceeding, the Department is approving conservation charge ("CC") decimals for the period July 1, 1993 through June 30, 1994 only. Consequently, the Department finds that it is appropriate to approve dollar amounts for CVR budgets for this period only. Therefore, the Department finds that, for the period July 1, 1993 through June 30, 1994, the proposed CVR budgets of \$76,000 and \$18,000 for Commonwealth and Cambridge, respectively, are reasonable and appropriate for inclusion in the CC. While the Department finds that the proposed equipment purchases for 1994 and 1995 appear to be reasonable and necessary for the successful implementation of CVR, the Department is not prepared to approve future years' budgets for CVR at this time. Rather, the Department directs the Companies to submit CVR budgets for 1994 and 1995 as part of the Companies' next CC

fil ing.

D. Cost-Effectiveness Analysis

1. Companies' Proposal

The Companies stated that their cost-effectiveness methodology is consistent with Department precedent and compares the cumulative net present value of the costs necessary to implement a program to the cumulative net present value of the benefits of the program (Exhs. C-4, at 2.6.9-2.6.10; DPU-3, Vol. 1, at 5.1.3-5.1.4). The Companies stated that for the CIR program, the costs considered in the cost-effectiveness analysis were taken from CIR budget projections and include development costs, engineering consulting costs, computer software leasing costs, distribution equipment costs, telephone equipment leasing costs, monitoring and evaluation costs, and incremental general and administrative costs (Exhs. C-4, at 2.6.10; DPU-3-CVR-4; DPU-3-CVR-7). Like other DST programs, the benefits include avoided energy costs, avoided capacity costs, avoided reserve margin, avoided line losses, avoided transmission and distribution costs, and avoided environmental externalities (Tr. 3, at 16-17; Exhs. C-3, at 2.2.6; C-4, at 2.6.9-2.6.10; DPU-3, Vol. 1, at 5.1.3-5.1.4; DPU-3-CVR-8; DPU-3-CVR-9). The projected benefit/cost ratios for the Companies' CIR programs are 2.47 for Commonwealth and 4.04 for Cambridge (Exh. C-4, at 2.6.9).

The Companies stated that they would also conduct cost-effectiveness screening on individual substations and feeders (Exhs. C-1, at 1.1.5; DPU-3-CVR-10). The benefits of CIR at the substation and feeder levels would be based on detailed computer models. The costs for equipment and upgrades would be determined on a case-by-case basis

(Exh. DPU-3-CVR-10). The Companies stated that this screening process would employ a cost-effectiveness analysis based on the same methodology as that used for the CIR program (i.d.).

2. Analysis and Findings

In D.P.U. 86-36-F at 19 (1988), the Department found that a C&LM program is cost-effective if the cumulative net present value of the program's benefits exceeds the cumulative net present value of its costs, i.e., if the benefit/cost ratio is greater than 1.0. In D.P.U. 86-36-F at 20-24 (1988), the Department set forth standards for C&LM program cost-effectiveness and required each electric company to include the following elements in its cost-effectiveness test: (1) the full incremental cost of the C&LM measure, regardless of who pays that cost (i.e., utility, customer, contractor); (2) all administrative costs incurred by a company that can be attributed to a given program; (3) any quantifiable and significant end-user benefits (e.g., reduced maintenance); and (4) environmental externalities. In Massachusetts Electric Company, D.P.U. 89-194/195, at 107-113 (1990), the Department refined its cost-effectiveness test to include free-riders and snap-back effects. In D.P.U. 89-260, at 16-17 (1990), the Department further refined its cost-effectiveness test to include monitoring and evaluation costs.

The record in this case indicates that the Companies' proposed cost-effectiveness methodology is consistent with the Department's requirements. The record shows that the Companies have included all relevant costs of CIR including development costs, consulting expenses, equipment costs, incremental general and administrative costs, and monitoring and evaluation costs. Likewise, the record shows that the Companies have accounted for all

relevant benefits of CIR including avoided energy, avoided capacity, avoided reserve margin, avoided transmission and distribution costs, and avoided environmental externalities. Because the implementation of CIR does not require decisions to be made by individual customers, the issues of free-riders and snap-back are not significant to this case. Based on the evidence in this proceeding, the Department finds that the Companies' cost-effectiveness analysis is appropriate and acceptable.

E. Monitoring and Evaluation

1. Companies' Proposal

The Companies propose to incorporate CIR monitoring requirements into the existing Supervisory Control and Data Acquisition ("SCADA") system (Exh. C-3, at 2.2.34). The incorporation of monitoring requirements into SCADA would require the Companies to install various types of equipment on the feeders and substations where CIR is implemented (i.d.). The purpose of this equipment would be to monitor electrical quantities on the primary distribution system and to supply real time values to the SCADA system. The equipment to be installed would include volt and ampere sensors, remote terminal units, modems, and radios (i.d.).

The Companies propose to implement a CIR evaluation plan that has the following objectives: (1) to provide acceptable precision in the measurement of energy savings; (2) to provide acceptable precision in the measurement of demand savings; (3) to measure program impacts by subsector (e.g., single family, multi family); (4) to monitor the persistence of savings over time; (5) to provide measure reconciliation where significantly different results occur between measurement techniques; (6) to provide the necessary input to cost-

effectiveness testing; and (7) to make recommendations about program design and implementation that result from evaluation findings (Exh. C-3, at 2.2.38). The Companies are proposing four possible methods by which to measure CWR savings. The Companies state that they would ultimately choose one of these methods based on a determination of the benefits of added accuracy of one method over the others versus the additional cost of utilizing that method (i.d. at 2.2.39).

The first method that the Companies are considering for the measurement of savings uses engineering estimates developed from engineering models (i.d.). The second method under consideration is a pre/post comparison method. This method compares changes in consumption over two time periods for both a participant and a non-participant group (i.d. at 2.2.39-2.2.41). The third method under consideration is a pre/post conditional demand model. This method accounts for the fact that a wide array of factors other than program participation may influence energy consumption. Use of this method increases the likelihood that the measured effects are due to the CWR program and not other non-program factors (i.d. at 2.2.41-2.2.43). The fourth method that the Companies are considering uses statistically adjusted engineering estimates. This method combines multiple sets of data into a single estimation framework and allows the Companies to audit the accuracy of their engineering estimates (i.d. at 2.2.43-2.2.44). Finally, the Companies state that they would measure the persistence of savings through periodic customer surveys and ongoing billing analyses (i.d. at 2.2.44).

2. Analysis and Findings

In general, the Department finds that the Companies' plans for the monitoring and evaluation of the CVR program are reasonable and acceptable. In D.P.U. 91-44, at 144 (1991), the Department ordered WMECo to provide an explanation for its choice of a particular evaluation technique over the other techniques under consideration. Similarly, in this case, the Department directs the Companies, within the time-frame of the initial 36-month CVR project, to explain their choice of evaluation technique for CVR over the other techniques under consideration. This explanation should be included as part of a subsequent Conservation and Load Management Annual Report ("C&LM Annual Report") (see Section III.H, infra).

F. Cost Allocation

1. Companies' Proposal

The Companies propose to allocate CVR program costs to the various rate classes in proportion to projected kilowatthour ("KWH") sales to each rate class (Exh. C-2, at 1.2.3).

2. Alternative Method for Cost Allocation

As part of the report on the applicability of CVR to their systems, the Companies cited a study by the Institute of Electrical and Electronic Engineers ("IEEE") which showed that the effectiveness of CVR varied by class of load (RR-DPU-CVR-3; Exh. C-3, at 2.2.10-2.2.11). Specifically, the study showed that for residential, commercial, and industrial class loads, the average percent energy savings for each one percent of voltage reduction is 0.76 percent, 0.99 percent, and 0.41 percent respectively (RR-DPU-CVR-3, at 1205; Exh. C-3, at 2.2.10-2.2.11). During the proceedings, the Department requested that

the Companies reallocate the costs for CIR so that the costs allocated to a rate class are weighted by both the projected KWH sales to that rate class and by the effectiveness of CIR upon the loads of that rate class (RR-DPU-CVR-2). The Department also requested that the Companies comment on the appropriateness of this cost allocation methodology (i.d.). In response, the Companies applied the respective CIR effectiveness weightings to the residential and commercial rate classes (RR-DPU-CVR-2). The Companies explained that the vast majority of their customer load profiles are dissimilar to those of industrial class customers and that, therefore, it was inappropriate to apply an industrial class weighting (i.d.). The Companies concluded that this revised methodology reflects an equitable approach to cost allocation by accurately assigning costs with consideration to the level of benefits received by customer classes and further stated that they would not object to the adoption of this modified cost allocation methodology (i.d.).

3. Analysis and Findings

The CIR program cost allocation methodology contained in Record Request DPU-CVR-2 considers both the projected KWH sales and the level of CIR benefits received by the Companies' various rate classes. The Department finds that, because the benefits of CIR are explicitly considered, this cost allocation methodology better provides for an equitable distribution of CIR costs than does the methodology, originally proposed by the Companies, that considers only projected KWH use among rate classes. Accordingly, the Department directs the Companies to adopt the CIR program cost allocation methodology contained in Record Request DPU-CVR-2.

G. Cost Recovery

1. Companies' Proposal

The Companies propose to recover the costs associated with CVR through the rate class-specific CC until their next respective base rate proceedings (Exh. C-2, at 1.2.3). At that time, the Companies propose to place their investments in CVR equipment¹⁹ into rate base (i.d.; Exh. DPU-3-CVR-3). The Companies further propose that any engineering consulting expenses or equipment leasing expenses incurred, as well as costs associated with additional equipment investment made subsequent to the test year of the base rate proceeding, continue to be collected through the CC (Exh. C-2, at 1.2.4). The Companies request that incremental general and administrative expenses, based on the internal staffing requirements of two full-time positions, be collected in base rates (Exhs. C-4, at 2.6.10; DPU-3-CVR-7).

The Companies propose that the costs associated with the equipment investments to be collected through the CC include a carrying charge on these investments (Exh. C-4, at 1.2.4). The Companies propose carrying charges of 23.291 percent for Commonwealth and 23.098 percent for Cambridge (Exh. DPU-3-CVR-5). The Companies explained that these carrying charges contain the following components: (1) the levelized cost of money; (2) levelized income taxes; (3) depreciation; (4) operations and maintenance costs; and (5) local taxes (i.d.). The Companies noted, however, that for the period of July 1, 1993 through June 30, 1994, no investments in CVR equipment would be made. Rather, the Companies stated

¹⁹ The term "CVR equipment" refers to all equipment necessary to implement CVR, including line sensing stations, radio coordinators, line regulators, remote terminal units, station regulators, and station controllers (Exhs. C-3, at 2.4.5-2.4.6, 2.4.12; DPU-3-CVR-3).

that the first investments in CVR equipment would occur in late 1994 (RR-DPU-CVR-4). As a result, the proposed CVR component for the July 1, 1993 through June 30, 1994 CC contains only engineering consulting expenses and computer software leasing expenses (i d.). The amounts that the Companies are requesting for recovery of these expenses through the CC for this period are \$76,000 for Commonwealth and \$18,000 for Cambridge (i d.). (See Section III.C.2 supra.)

The Companies stated that they are not seeking recovery of any lost base revenues resulting from CVR program implementation during the period July 1, 1993 through June 30, 1994 (i d.; Tr. 3, at 29-30). The Companies explained that KWH savings associated with CVR would not occur until late 1994, the time when requisite CVR equipment would be installed. The Companies stated that at such time, they would seek to recover lost base revenues associated with this program (Tr. 3, at 40-41; RR-DPU-CVR-4).

2. Analysis and Findings

The Department finds that, in general, the Companies' proposal to collect CVR-related costs through the rate class-specific CC is consistent with Department precedent and appropriate for the CVR program. However, the Department finds that it is appropriate, at this time, to approve only the specific components of the CC charge that have been presented for recovery in the CC period presently under consideration, i.e., the engineering consulting expenses and computer software leasing expenses for the period July 1, 1993 through June 30, 1994. The Companies, therefore, may recover through the CC mechanism, in accordance with the findings in Section III.F.3 supra regarding cost allocation, \$76,000 for Commonwealth and \$18,000 for Cambridge. Because the Companies are not requesting

recovery of CIR equipment investments for the upcoming CC period, the Department finds that, at this time, it is inappropriate to make specific findings regarding either the Companies' request on the inclusion of equipment investment in the CC, or the Companies' request on the specific carrying charge mechanism. Likewise, the Department finds that, at this time, it is not appropriate to make preliminary findings regarding the recovery of LBR associated with the CIR program since such recovery would not take effect until after the upcoming CC period.

H. Reporting Requirements

Each year, the Companies report on the status of their C&LM programs to the Department through the required C&LM Annual Report. The Department hereby directs the Companies to include, in all subsequent C&LM Annual Reports, updates for the CIR program. The Department directs the Companies to follow, to the extent possible, the formats for tables and narrative as may currently be required by the Department for C&LM Annual Reports. In addition, the Department directs the Companies to include in the CIR section of the C&LM Annual Reports 1) any changes to the CIR program design or budget resulting from field experience, 2) an update of the cost-effectiveness of the program, and 3) the requirements for CIR monitoring and evaluation as delineated in Section III.E.2 supra.

IV. CONSERVATION CHARGE DECIMALS

A. The Companies' Proposal

1. Revised Tariffs

The Companies proposed to recover all DST expenditures and lost base revenues

through revised CC decimals, as defined in rate tariffs M.D.P.U. Nos. 276 and 523, for Commonwealth and Cambridge, respectively (Exh. C-6, at 1.2.3). These tariffs would replace the current CC tariffs (Nos. 274 and 501 for Commonwealth and Cambridge, respectively) that were approved by the Department in D.P.U. 91-80 Phase Two-A (1992) (i.d. at 1.2.4).

The Companies state that the proposed CCs are based on revised budget projections of ongoing program implementation expenses, taking into account Department directives in D.P.U. 92-218, reconciliation of over- and under-recoveries, the recovery of CWR program expenses, and the recovery of LBR (Companies Brief at 17-18).

For Commonwealth, current CC decimals are calculated for six different rate categories: residential, residential space heating, small general, medium/large general, all-electric school, and other (Exh. C-6, at 1.2.4). For Cambridge, the rate categories are the same, except that it has no all-electric school category (i.d.).

The Companies testified that, in accordance with the Department's directives in D.P.U. 91-80, the CC decimals are calculated annually and are applied to customers' bills on a per-KWH basis using a non-prorating methodology (i.d.). Further, each CC decimal may be adjusted on an interim basis, with Department approval, if, at any time, it is projected to over- or under-recover costs by more than 10 percent (i.d.). Finally, actual costs and revenues for each rate category are annually reconcilable, with any mismatch, either positive or negative, applied to the calculation of the next period's CC (i.d.).

The Companies stated that the proposed new tariffs (M.D.P.U. Nos. 276 and 523) will continue to be calculated using the same methodology with the addition of a provision

for LBR (i d.). At the request of the Department, the Companies submitted revised rate schedules for these tariffs to include a more complete description of LBR and the way in which LBR is to be reconciled (RR-DPU-LBR-9).

2. Time Periods

The Companies proposed to calculate CC decimals for the six-month period July 1, 1993 through December 31, 1993, and then to request revised CC decimals in December 1993 to be in effect for calendar year 1994 (Exh. C-6, at 1.2.9, 1.2.11, 1.2.16-17).

Although the Companies submitted calculated CC decimals for 1994, based on projected budgets, they did not request approval of 1994 rates with this filing (i d. at 1.2.12, 1.2.18). Consistent with the Companies' proposal and with their response to a Department record request, the Companies filed CC decimals for each rate category, for each Company, and for three different time periods, as shown in Tables 1 and 2, attached.

The Companies testified that the CC decimal for each rate category is developed by adding direct expenses, indirect expenses that have been allocated to each category, and the prior period reconciling adjustment. The total of these three is then divided by projected KWH sales for each rate category for the time period under consideration (i d. at 1.2.8-9, 1.2.16). According to the Companies, the reconciling adjustment for Commonwealth covers the 18 months ending June 30, 1993, and the reconciling adjustment for Cambridge covers a 15-month period ending the same date, based on the dates that their respective CC rates originally took effect (i d. at 1.2.7, 1.2.15).

The Companies testified that they have calculated one set of CC decimals to be in effect from July 1 through December 31, 1993, and that they will be requesting approval of a

revised set to run from January 1 through December 31, 1994, rather than one 12-month CC to be in effect from July 1, 1993 through June 30, 1994,²⁰ because their tariffs require annual CC rates beginning on January 1 of each year (Tr. 2, at 13-14). The Companies also testified that, because there was a large overcollection in some rate categories in 1992, they propose to refund the money to their customers through the reconciling adjustment over six months rather than 12, even though that proposal would result in some CC rates almost doubling between December 1993 and January 1994 (*id.* at 9-10). In addition, the Companies contend that approval of their proposal for a six-month CC rate at this time and a 12-month CC rate beginning January 1994 would establish firmly an annual CC decimal review proceeding that would provide greater certainty to customers (Companies Brief at 18).

Nonetheless, the Companies indicate that they would not oppose the implementation of a CC decimal to be in effect over the 12-month period ending June 30, 1994, stating that such action would help preserve rate continuity during the time in which a defined level of program activity is anticipated (*id.*). However, the Companies note their concern for potential short-term rate impacts for Commonwealth's commercial and industrial customers, when calculating rates for the 12-month period July 1, 1993 through June 30, 1994, (see Tables 1 and 2), and request that, if this option is pursued, certain expenses be deferred, with carrying costs, or, in the alternative, an amortization plan be approved that is consistent with that approved in D.P.U. 91-80 Phase Two-A (*id.* at 18-19).

²⁰ New C&LM programs are projected to be implemented beginning July 1, 1994, pursuant to the IRM process. See Section I, supra.

3. Rate Impacts

a. Residential and Residential Heating

The CC decimal for Cambridge's residential rate category shows large fluctuations between the current rate and the Companies' proposed six-month rate, and again, between the six-month rate and the calendar year 1994 calculated rate (Exh. C-6, at 1.2.17, 1.2.18). These fluctuations are smoothed out by the calculation of a 12-month rate running from July 1, 1993 through June 30, 1994. (See Table 2.)

For Commonwealth's residential heating customers, the rate rises from \$0.00079 for the last six months of 1993 (i.d. at 1.2.9, revised) to \$0.00510 for 1994 (i.d. at 1.2.11) in the Companies' proposal, or to \$0.00275 for the 12 months from July 1, 1993 through June 30, 1994 (RR-DPU-LBR-6, revised). However, the Companies point out that the current CC decimal for this rate category, \$0.00090, became effective in February 1993 as the result of a previous over-recovery, and that the 1992 rate was \$0.00405 (i.d.). Compared to the 1992 rate, Commonwealth's electric heating customers will see a decrease in rates if the Department adopts the 12-month rate for the period July 1, 1993 through June 30, 1994 (i.d.).

b. Small General

For customers in the small general rate category for Cambridge, the Companies proposed to cap the CC decimal at \$0.00450, for a six-month CC decimal to be in effect from July 1, 1993 through December 31, 1993, rather than set it at the calculated \$0.00636, in order to minimize short-term rate impacts. The Companies propose to defer the balance of expenditures until 1994, without carrying costs (Exh. C-6, at 1.2.16).

For the small general category for Commonwealth, the Companies have calculated a CC decimal of \$0.00512 for the 12 months from July 1, 1993 through June 30, 1994 (RR-DPU-LBR-2, revised). The Companies included in the calculation \$1,200,000 in expenses associated with invoices for C&LM services received from a contractor, Resource Conservation Systems, Inc. ("RCS"), that remain outstanding pending ongoing litigation (Exh. C-10, at 2.1.19, 2.1.21; Tr. 2, at 83-84). The Companies testified that payments for these invoices were originally projected to be made in January 1994, and that continuing inspections and analysis indicate that the amount may well be reduced (*i.d.* at 76, 84). On June 1, 1993, the Companies submitted a letter to the Department updating the status of the litigation with RCS. This letter indicates that the litigation most likely will not be resolved until March 1995, and, therefore, the Companies have reduced the projected budget for this rate category for 1994 by \$1,200,000 (Exh. DPU-24). In addition, because the direct expenditures are thus reduced, the allocation of indirect expenditures also will change (*i.d.*). Should the Department order a CC decimal to be in effect for the 12 months from July 1, 1993 through June 30, 1994, and if this decimal still exceeds \$0.00450, the cap set in D.P.U. 91-80 Phase Two-A for these customers, the Companies request approval to defer certain expenses (with carrying costs) by means of a decimal cap or an amortization program, in order to mitigate the rate impact for this category (RR-DPU-LBR-2, revised).

c. Consolidation of the All-Electric School and the
Medium/Large General Rate Categories

Because of the large projected increase in the proposed rate for the all-electric school category in Commonwealth's service territory, the Companies proposed to consolidate the

all-electric school and the medium/large general rate categories (i.d. at 1.2.10). The Companies testified that spreading the DST costs over the KWH consumption projected for the 15 customers in the all-electric school category results in a substantially higher CC decimal for this category than for all other rate categories and represents a substantial burden on these customers (i.d. at 1.2.9-10).

In their Reply Brief, the Companies state that revenues resulting from the current CC decimal for the medium/large general rate category (\$0.00450) will result in an over-recovery for this category of \$1,202,248 by June 30, 1993 (Companies Reply Brief at 2). The CC decimal for the all-electric school category (\$0.00165) times KWH sales to this category will result in an under-recovery of \$472,149 by the same date (i.d.). Combining these reconciliations with projected costs for the last six months of 1993 and for 1994 results in the CC decimals shown in Table 1.

For the 12 months from July 1, 1993 through June 30, 1994 for Commonwealth, the calculated CC decimal of \$0.00437 for the medium/large general category (RR-DPU-LBR-2, revised) includes \$1,100,000 associated with invoices for direct program expenses received from RCS. These invoices for installations made in the Direct Investment and CRP programs have not yet been paid, pending the outcome of litigation (Exh. C-10, at 2.1.20, 2.1.22). The Companies testified that payments originally were projected to be made for these invoices in January 1994, but that continuing inspections and analysis indicate this amount may well be reduced (Tr. 2, at 76, 84). On June 1, 1993, the Companies submitted a letter to the Department updating the status of the litigation with RCS. This letter indicates that the litigation most likely will not be resolved before March 1995, and, therefore, the

Companies have reduced the projected budget for this rate category for 1994 by \$1,100,000 (Exh. DPU-24). In addition, because the direct expenditures are thus reduced, the allocation of indirect expenditures also will change (i.d.). As with the small general rate category, should the Department order a combined decimal to be in effect from July 1, 1993 through June 30, 1994, and if this decimal still exceeds \$0.00450, the cap set in D.P.U. 91-80 Phase Two-A for these customers, the Companies request approval to defer certain expenses (with carrying costs) by means of a decimal cap or an amortization plan, in order to mitigate the rate impact for this category (RR-DPU-LBR-2, revised).

B. Positions of the Parties

1. IRATE

IRATE stresses the need for reduction of every element of cost consistent with providing low-cost, reliable power, and states that conservation charge decimals should be held at minimum levels while excess capacity exists (IRATE Brief at 4-5). IRATE did not address specifically the projected rate impacts on any one class, nor the proposal to combine the all-electric school and medium/large general rate categories.

2. SORE

SORE confines its comments to the issue of combining the all-electric school with the medium/large general rate categories (SORE Brief at 2). SORE contends that this proposal is unfair and violates the Department's policies regarding the recovery of C&LM costs (i.d. at 3). According to SORE, these policies are based on the premise that each rate class pays for only those C&LM services that it receives (i.d.). SORE contends that, notwithstanding the Department's precedent regarding the allocation of C&LM program expenditures by rate

class, Commonwealth proposes to consolidate the separate C&M expenditures made for the all-electric school class with those made for the medium/large general customers (i.d.).

SORE argues that consolidating the under-recovery of the all-electric school class with the over-recovery of the medium/large general category to mitigate the burden on the schools is "grossly inequitable, contravenes the Department's earlier directives, and violates fundamental principles of fairness" (i.d. at 4). SORE has calculated that this proposal results in a \$515,000 subsidization of the all-electric school class by the medium/large general customers for expenditures actually incurred for the schools (i.d.).

SORE disputes Commonwealth's contention that the overall level of the CC decimal is such that it still would help to address the large customers' concerns with short-term rate impacts resulting from DST (i.d. at 5). SORE contends that the Companies' proposal constitutes a significant detriment to large customers and to their efforts to revitalize the manufacturing base in southeastern Massachusetts (i.d. at 6). SORE also asserts that Commonwealth's proposal to have its large customers subsidize the all-electric school customers (who, SORE contends, are located primarily outside of the greater New Bedford area) shows an insensitivity to SORE's concern for the retention and creation of jobs and economic development in the New Bedford area (i.d.).

Further, SORE argues that this proposed rate consolidation is inconsistent with the Companies' original proposal to defer, without carrying charges, the collection of C&M expenditures incurred for the small general category in order to mitigate short-term rate impacts (i.d.). SORE suggests that deferral without carrying costs may also be appropriate for the all-electric school class (i.d. at 7).

SORE also contends that because the medium/large general customers contributed the over-recovery by Commonwealth of \$1,202,248, fairness demands that this over-collection be returned to only those customers, and not at all to the all-electric school customers (SORE Reply Brief at 1-2). SORE also disputes the Companies' contention that \$0.00450 is a reasonable level for a CC decimal for this class, stating that this level was agreed to as a cap, or maximum acceptable level, and not, per se, a reasonable level (i.d. at 3).

Finally, SORE argues that the all-electric school category should continue to be recognized as a separate group for purposes of establishing CC decimals, in part because the C&LM expenditures incurred for this group were fundamentally different from those incurred for the medium/large general customers (i.d. at 4-5). For instance, SORE maintains that, because the schools are by nature all-electric customers, the C&LM opportunities available to them differ from those for customers who do not have electric heat (i.d. at 5). Since Commonwealth spent significantly more per KWH on the electric school customers than on medium/large general customers, there were presumably higher benefits provided to the school customers. The difference in cost incurrence is the basis for class distinctions and should be the basis for separate CC decimals, according to SORE (i.d.).

3. The Companies

The Companies argue that their proposal to establish CC decimals for the six-month period July 1 through December 31, 1993 and for the 12-month period January 1 through December 31, 1994 would establish firmly an annual CC decimal review process and would allow for more immediate reconciliations for over-recoveries from 1992 (Companies Brief at 18). The Companies would not oppose implementation of CC decimals for the 12-month

period July 1, 1993 through June 30, 1994, but note their concern regarding short-term rate impacts for Commonwealth's commercial and industrial customers if this time period is used (i.d.). If the CC decimals are implemented for the 12-month period July 1, 1993 through June 30, 1994, the Companies also request deferral or amortization of certain expenses to mitigate these rate impacts (i.d. at 19).

The Companies contend that their proposal to combine the all-electric and medium/large general rate categories for Commonwealth is equitable and in the long-term best interest of all of Commonwealth's customers (Companies Reply Brief at 2). The Companies state that a CC decimal of the magnitude calculated for the all-electric school category on a stand-alone basis for 1993 (\$0.05873) "creates unacceptable burdens which are appropriately mitigated by the proposed inclusion" of these customers as part of the medium/large general category for CC purposes (i.d. at 3). The Companies contend that the combined (all-electric school and medium/large general categories) CC decimal for Commonwealth for the same period (\$0.00240) still would be a substantial net decrease in the CC for the medium/large general category, reflecting Commonwealth's efforts to control short-term rate impacts for its largest customers (i.d.).

The Companies further argue that their proposal is consistent with Department precedent in establishing the CC mechanism, whereby conservation costs are allocated to the rate categories for which expenditures in a given program are made (i.d.). In this instance, the Companies state that customers in both the all-electric school and the medium/large general categories receive ~~DS~~ services through the same program, CIP, and share similar usage characteristics (i.d. at 3-4).

The Companies also contend that the proposed rate consolidation does not amount to a subsidization of the all-electric school customers by the medium/large general customers (i.d. at 4). According to the Companies, the term "subsidization" implies that, solely for equity reasons, one group of customers bears costs incurred by another group (i.d.).²¹ In this case, the Companies argue that the proposal seeks to assign similar C&M expenses accurately to customers in those rate categories benefiting similarly from the expenditures (i.d.). In addition, the Companies note that in the years following 1993, combining these two rate categories would serve to slightly reduce the CC decimal for the medium/large general category (i.d. at 4-5).

In conclusion, the Companies assert that they are committed to the welfare of all of their customers, and that this proposal reasonably balances competing concerns and is consistent with Department precedent (i.d. at 5). The Companies contend that all customers benefit by reasonable steps taken to mitigate the cost burdens that public schools must bear, and that this rate consolidation proposal serves to mitigate such burdens directly in an equitable fashion (i.d.).

C. Analysis and Findings

1. Revised Tariffs

In Cambidge Electric Light Company and Commonwealth Electric Company, D.P.U. 89-114/90-331/91-80 Phase One at 169-170 (1991), the Department directed the Companies

²¹ The Companies also note that from 1989 through 1991 (when the majority of expenditures were incurred for the C&I classes), C&M costs were recovered through the fuel charge on a uniform basis from all customers (i.d.).

to develop a CC mechanism for the collection of C&LM expenditures. The Department found that the CC mechanism allows for a number of features in C&LM cost recovery, including the ability (1) to allocate program costs to rate classes receiving the benefits of a particular program, (2) to review and reconcile expenditures on a regular basis without the burden of a general rate case, and (3) to amortize expenditures.

The Companies have modified the CC rate tariffs approved in D.P.U. 91-80 Phase Two-A to include the collection of LBR, along with a description of how LBR will be reconciled. The Department finds that the Companies' proposed CC rate tariffs, numbers M.D.P.U. 501 for Cambridge and M.D.P.U. 274 for Commonwealth, as revised in response to RR-DPU-LBR-9, are consistent with Department precedent and are, therefore, approved.

2. Time Periods

The Companies have proposed to implement CC rates calculated to be in effect from July 1, 1993 through December 31, 1993, and then to submit revised CC rates for the calendar year 1994. Although the Companies have not requested approval of the rates calculated for 1994, they have submitted estimates of those rates based on Company projections of program activity and LBR consistent with the status quo, *i.e.*, with only the Companies' own preapproved DST programs being implemented throughout 1994. The Companies' estimates show that the CC rates for most categories fluctuate greatly when calculated in this manner. Specifically, residential heating customers would be subject to a significant rate increase during the peak of the heating season if these rates were to take effect. See Section IV.A.3.a, supra.

In addition, pursuant to the Interim Order of May 29, 1992 in the Companies' IRM

case, D.P.U. 91-234, the Companies must submit an RFP for DST services, along with the Companies' own proposals for DST services, to target all customer classes. Id. at 2. The schedule set forth in the Interim Order anticipates that implementation of all new programs will begin on July 1, 1994. Id. at 3. In the meantime, the Companies' C&LM programs that were preapproved in D.P.U. 91-80 Phase Two-A (Hot Water/General Use, Residential Electric Space Heat, and the pipeline projects in CRP²²) will continue to be implemented through June 30, 1994, and the costs for them will be recovered through the CC decimals.

Although the Companies' CC rate tariffs specify that CC decimals will be calculated to take effect on January 1 of each year, present circumstances of program implementation and projected major changes on July 1, 1994 lead the Department to conclude that CC rates effective from July 1, 1993 through June 30, 1994 will provide a greater degree of rate continuity and will be in the best interests of the Companies' ratepayers. Accordingly, the Department directs the Companies to recalculate CC decimals for the 12-month period from July 1, 1993 through June 30, 1994, and to incorporate the directives regarding LBR, CVR, and expenses relating to litigation found elsewhere in this Order. When the Companies submit the final award group to provide DST services through the IRM process on April 1, 1994, they should also submit proposed revised CC decimals reflecting the costs per rate category to implement this set of programs, including the costs to implement CVR. These revised CC decimals should cover the period from July 1, 1994 through June 30, 1995.

²² The pipeline projects are those projects that the Companies had committed to implementing but which had not yet been implemented at the time of the suspension of the CRP in April 1991. The Department approved the Companies' honoring these commitments when it approved the Settlement in D.P.U. 91-80 Phase Two-A.

Consistent with the revised tariffs, the Companies are also required to request adjustments to the CC decimals, on an interim basis, should collections from any one or more of the approved CC decimals exceed the sum of actual and projected expenditures for a category by more than 10 percent.

3. Rate Impacts

a. CC Decimals

The Companies will begin collecting LBR on July 1, 1993 for measured savings achieved through their DSI programs since January 1, 1993, for all C&LM installations completed after the end of their respective test years. See Section II, supra. Recovery of estimated LBR for the entire year of 1993 over just the last six months of 1993 results in high rate increases for some rate categories during that time period, whereas spreading this same amount over the 12 months from July 1, 1993 through June 30, 1994 will help to mitigate this impact. Recovery amounts for LBR to be included in the CC decimals should be consistent with the Department's findings in Section II.C.2, supra, and should be calculated to spread the 18-months' worth of LBR projected to accrue between January 1, 1993 and June 30, 1994 over the 12 month period from July 1, 1993 through June 30, 1994.

In their budget projections for 1994 for the small and medium/large general categories for Commonwealth, the Companies have included a total of \$2,300,000 in program expenses associated with invoices for C&LM measure installation by a contractor (RCs), which invoices are the subject of litigation. The Companies testified that, because of ongoing inspections and analysis, they expect those payment amounts to be reduced. The Companies also have indicated in a letter to the Department that this litigation will not be resolved until

March 1995, and that they propose to deduct \$2,300,000 from projected 1994 expenses and to re-allocate indirect expenses based on this deduction. The Department finds this proposal reasonable and, therefore, directs the Companies to recalculate CC decimals for all rate categories, for the period July 1, 1993 through June 30, 1994, taking into account the changes necessitated by this deduction.

Expenses for CVR should be collected through the CC decimals consistent with the Department's findings on CVR in Section III.G.2, supra.

With the three changes ordered above, the CC decimals calculated to be in effect from July 1, 1993 through June 30, 1994 should result in a greater measure of rate continuity for the Companies' ratepayers than would result from the Companies' proposal for a six-month rate followed by a 12-month rate, given the approval of recovery for LBR and the continuation of the Companies' current programs through June 30, 1994.

b. Small General Cap

Similarly, with the changes in the CC decimals mandated by Department directives in this Order, the recalculated CC decimals for the small general categories for both Cambridge and Commonwealth should be below the \$0.00450 level. However, if either or both of the calculated CC decimals for the small general category should be higher than that level, the Companies should maintain the decimal at \$0.00450 and propose a specific deferral or amortization scheme for the excess expenses.

c. Consolidation of the All-Electric School and
Medium/Large General Rate Categories

The Companies have proposed to consolidate the all-electric school and the

medium/large general rate categories for the purpose of calculating CC decimals. The Companies argue that the consolidation of these two categories is equitable and in the long-term best interest of all of Commonwealth's ratepayers. The Companies also state that applying the full amount of the under-recovery in the all-electric school category solely to that rate category would impose too large a burden on such few customers. Further, the Companies argue that the rate for the combined all-electric school and medium/large general category is still below the cap imposed in D.P.U. 91-80 Phase Two-A. In addition, the Companies state that both the all-electric school and the medium/large general customers receive C&LM services from the same program (CRP), and that it is therefore appropriate and consistent with Department precedent for the two categories to share expenses and cost recovery for this program.

SORE argues that the proposed consolidation violates Department precedent and causes one class of customers to unfairly subsidize another class. SORE also asserts that the rate cap imposed in D.P.U. 91-80 Phase Two-A was just that -- a cap -- and not a reasonable level for a CC decimal for this class of customers.

In establishing the CC mechanism for the collection of C&LM expenditures, one of the reasons cited by the Department was that it provides companies with the ability to allocate program costs to rate classes receiving the benefits of a particular program. See D.P.U. 91-80 Phase One (1991) at 169-170. The Companies have testified that both the all-electric school and the medium/large general categories receive services through the same C&LM program, the CRP. Although SORE points out that the Companies spent more per kWh on the all-electric school customers through this program in 1992, the same may not

be true in future years, and, in fact, the entire budgets for pipeline projects in this program are projected to be expended on customers in the medium/large general category, and not in the all-electric school category (Exh. C-10, at 2.1.9-10, 2.1.22-23).

In developing CC decimals in compliance with Department directives in D.P.U. 91-80 Phase One, the Companies proposed, and the Department approved, six different rate categories for Commonwealth's customers. Each of these categories (with the exception of the all-electric school category) is composed of at least two rate classes. The medium/large general category is made up of both medium and large commercial and industrial customers who take electric service under rate classes G-2 and G-3. No party to D.P.U. 91-80 contested the Companies' proposal nor the Department's approval of this consolidation of rates.

In addition, no other investor-owned electric company in the Commonwealth has a separate rate for all-electric schools. For all companies except Commonwealth Electric, schools are included in a commercial or industrial rate class, because their cost characteristics are similar enough to other customers in these classes to warrant such inclusion. In the instant case, the Department must determine whether the costs and benefits of the C&I program accruable to the all-electric school category are similar enough to those accruable to the medium/large general category, and, if so, whether these two categories should be combined for purposes of calculating the CC decimals.

In weighing the evidence in this matter, the Department is sensitive to the concerns of Commonwealth's large industrial customers, who are represented by SORE, but also to the medium C&I customers and to the all-electric school customers, who did not have direct

representati on i n thi s case. Hi stori call y, the Department has attempted to group customers i nto rate classes that are reasonably representati ve of the cost of servi ng each customer. See, for exampl e, Boston Edi son Company, D.P.U. 1720, at 138 (1984). I n addi ti on, the Department has stated that when a company proposes to consoli date two or more rate classes, rate conti nui ty concerns must be addressed. See, for exampl e, D.P.U. 89-114/90-331/91-80 Phase One at 285-287 (1991).

The Department fi nds that customers i n both the all -electri c school and the medi um/large general categori es are eli gi ble for the same C&LM program, that they i ncur the same types of costs and share the same types of benefi ts from these programs. The Department al so fi nds that the CC deci mal , cal cul ated by the reconci li ati on of both categori es' 1992-1993 expendi tures combi ned wi th the projecti ons of expendi tures for the remai nder of 1993 and the fi rst hal f of 1994, wi ll not resul t i n unacceptabl y hi gh rates for ei ther category. Accordi ngly, the Department di rects the Compani es to cal cul ate one CC deci mal for the consoli dated all -electri c school /medi um/large general rate category to be i n effect from July 1, 1993 through June 30, 1994, and i n accordance wi th al l other di recti ves i n thi s Order.

V. ORDER

Accordi ngly, after due noti ce, heari ng, and consi derati on, i t i s

ORDERED: That the tari ffs of Cambri dge Electri c Li ght and Commonweal th Electri c Compani es, M.D.P.U. No. 523 and No. 276, respecti vely, fi led wi th the Department on December 23, 1992, proposi ng to col lect l ost base revenues through the

Companies' respective conservation charges, be and hereby are ALLOWED in accordance with the findings in Section II of this Order; and it is

FURTHER ORDERED: That the revisions to the conservation charge rate tariffs of Cambridge Electric Light and Commonwealth Electric Companies, M.D.P.U. No. 501 and No. 274, respectively, are ALLOWED in accordance with the findings in Section IV of this Order; and it is

FURTHER ORDERED: That Cambridge Electric Light and Commonwealth Electric Companies shall comply with all directives contained in this Order.

By Order of the Department,

TABLE 1. COMMONWEALTH ELECTRIC COMPANY

Rate Category	Current CCs*	Calculated CCs For:		
		7/1/93-12/31/93*	1994**	7/1/93-6/30/94#
Residential	\$0.00089	\$0.00053	\$0.00076	\$0.00065
Residential Heating	(0.00090)	0.00079	0.00510	0.00275
Small General	0.00415	0.00437	0.00590	0.00512
Med/Lge General	0.00450	0.00105	0.00671	0.00437
All-Elec. School	0.00165	0.05873	0.00625	0.03353
Combined	N/A	0.00240	N/A	0.00505
Other	0	0	0	0

* Exhibit C-6, at 1.2.9 and 1.2.9, revised

** Exhibit C-6, at 1.2.11

RR-DPU-LBR-2, revised

TABLE II. CAMBRIDGE ELECTRIC LIGHT COMPANY

Rate Category	Current CCs*	Calculated CCs For:		
		7/1/93-12/31/94*	1994**	7/1/93-6/30/94#
Residential	(\$0.00095)	\$0.00434	\$0.00041	\$0.00235
Residential Heating	(0.00212)	0.00086	0	0.00033
Small General	0.00062	0.00636	0.00212	0.00372
Med/Lge General	0.00581	(0.00157)	0.00186	0.00042
Other	(0.00190)	0.00053	0	0.00027

* Exhibit C-6, at 1.2.17

** Exhibit C-6, at 1.2.18

RR-DPU-LBR-2, revised